

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

For Public Release

1. OCCURRED

DATE: 15-JUL-2020 TIME: 1411 HOURS

2. OPERATOR: Shell Offshore Inc.

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

- ☐ STRUCTURAL DAMAGE
☐ CRANE
☐ OTHER LIFTING
☐ DAMAGED/DISABLED SAFETY SYS.
☐ INCIDENT >\$25K
☐ H2S/15MIN./20PPM
☒ REQUIRED MUSTER
☒ SHUTDOWN FROM GAS RELEASE
☐ OTHER

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR
ON SITE AT TIME OF INCIDENT:

4. LEASE: G33733

AREA: MC LATITUDE:

BLOCK: 437 LONGITUDE:

5. PLATFORM: A-Appomattox

RIG NAME:

6. ACTIVITY: ☐ EXPLORATION(POE)
☒ DEVELOPMENT/PRODUCTION
(DOCD/POD)

7. TYPE:

INJURIES:

☐ HISTORIC INJURY

OPERATOR

CONTRACTOR

☐ REQUIRED EVACUATION

☐ LTA (1-3 days)

☐ LTA (>3 days)

☐ RW/JT (1-3 days)

☐ RW/JT (>3 days)

☐ FATALITY

☐ Other Injury

☐ POLLUTION

☐ FIRE

☐ EXPLOSION

LWC ☐ HISTORIC BLOWOUT

☐ UNDERGROUND

☐ SURFACE

☐ DEVERTER

☐ SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION ☐ HISTORIC ☐ >\$25K ☐ <=\$25K

8. OPERATION:

- ☒ PRODUCTION
☐ DRILLING
☐ WORKOVER
☐ COMPLETION
☐ HELICOPTER
☐ MOTOR VESSEL
☐ PIPELINE SEGMENT NO.
☐ OTHER

9. CAUSE:

- ☐ EQUIPMENT FAILURE
☒ HUMAN ERROR
☐ EXTERNAL DAMAGE
☐ SLIP/TRIP/FALL
☐ WEATHER RELATED
☒ LEAK
☐ UPSET H2O TREATING
☐ OVERBOARD DRILLING FLUID
☐ OTHER

10. WATER DEPTH: 7400 FT.

11. DISTANCE FROM SHORE: 92 MI.

12. WIND DIRECTION:
SPEED: M.P.H.

13. CURRENT DIRECTION:
SPEED: M.P.H.

14. SEA STATE: 0 FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

INCIDENT SUMMARY:

On 15 July 2020, Appomattox, Shell Offshore Production's platform at Mississippi Canyon 437 A, experienced an unplanned gas release on the platform while attempting to start up the Bulk Gas Compressor (BGC) #1. The facility safety system responded in accordance with applicable regulations and no injuries or damages occurred as a result of the release.

SEQUENCE OF EVENTS:

At 2:00 pm, the platform experienced problems with the in-service and operational BGC #2. The BGC #2 was then shut down. Personnel immediately began startup procedures for the BGC #1 Gas Compressor.

At 2:19 pm, multiple gas detectors alarmed and a Process Shut Down (PSD) was automatically initiated.

At 2:26 pm, a deck operator in the area between the Utility and Process Module verified that he smelled gas and the control room operator manually activated the Emergency Shut Down (ESD) and the primary Muster Alarm. All 87 Personnel On Board were accounted for within four minutes.

The Incident Commander sent the Fire/Response Team to investigate. The team found a level bridle with two drain valves left open on the BGC #1 Gas Scrubber. The gas scrubber removes trace liquid droplets from the produced natural gas before it enters the compressor. The level bridle drain valves were closed and inspected for damage. After the all-clear signal was given, personnel began the startup procedures for the BGC #1.

BSEE INVESTIGATION:

Shell reported the incident to the Bureau of Safety and Environmental Enforcement (BSEE) New Orleans District through the After Hours call number on 15 July 2020. Shell also submitted a written report on 22 July 2020. On 31 July 2020, the BSEE Accident Investigator (AI) began communicating with both Offshore Installation Managers assigned to the location as well as other Shell contacts. The AI requested and received statements and photos. Shell personnel reported finding the drain valves open on the level bridle. However, Shell has not determined why the Level Safety High Low (LSHL) level bridle drain valves were not closed prior to starting up the BGC #1 compressor. The valves have to be manually opened and closed. Shell documents indicate that the BGC #1 had not been in service since 18 June 2020. Also, the last LSHL test and bridle clean-out was performed 20 June 2020. Shell calculations indicate that 1838 kg of gas was released over a 25-minute period. Shell documents indicated that there had been numerous false alarms in the past from these gas detectors. However, the Control Room Operator (CRO) allowed the proper shutdown procedures to continue.

CONCLUSIONS:

Personnel failed to isolate the LSHL bridle drain valves before attempting to start up the BGC #1 compressor. Personnel failed to perform a thorough precheck walk-through of the equipment before putting it in service. Also, it is determined that the gas detectors functioned as designed. They alerted the CRO of a gas released and even though the detectors were acknowledged in the control room, they continued monitoring the release until the critical trip set point initiated the PSD. The CRO also acted

appropriately by functioning the ESD and mustering personnel before the source of the release was known. Shell's gas detection and safety shutdown system functioned per BSEE approved regulatory drawings.

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18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

Human Performance Error - Rushing to get job completed: Personnel were in a hurry to start up the BGC #1 Gas Compressor after the BGC #2 Gas Compressor had an unplanned shut down and produced gas started flaring.

Human Performance Error - Not following proper procedures: Personnel failed to perform an adequate walk through of the BGC #1 Gas Compressor system prior to attempting to start it.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

Human Performance Error - Inattention to task: Personnel failed to close valves after testing. According to maintenance and testing records, the drain valves may have been unintentionally left opened on June 20th.

20. LIST THE ADDITIONAL INFORMATION:

N/A

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

N/A

N/A

ESTIMATED AMOUNT (TOTAL): \$

22. RECOMMENDATIONS TO PREVENT RECCURANCE NARRATIVE:

The BSEE New Orleans District makes no recommendations to the Office of Incident Investigation.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

N/A

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

26. INVESTIGATION TEAM MEMBERS:

Gerald Taylor /

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

27. OPERATOR REPORT ON FILE:

30. DISTRICT SUPERVISOR:

David Trocquet

